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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,463

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Shinichiro Mori

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EXAMINER

GARY, ERIKA A

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

08/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,463

Applicant(s)

MORI, SHINICHIRO

Examiner

Erika A. Gary

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitation "the surface" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's submission of prior art, Vannatta et al., US Patent Number 5,649,306 (hereinafter Vannatta).

Regarding claim 2, Vannatta discloses a mobile terminal comprising: a first antenna as an omnidirectional antenna; a second antenna as directional antenna; and a switching unit for switching over the antenna for receiving; a printed circuit board mounted with the first antenna and the second antenna; a first box body holding the printed circuit board; and a second box body rotatably secured to the first box body, wherein the first antenna is provided in the vicinity of a front edge portion on the side opposite to the securing side of the first box body on the printed circuit board, and the

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second antenna is provided on an flip side of a surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together [abstract; col. 4: lines 41-62; col. 7: line 48 – col. 8: line 9]. Vannatta teaches that the two antennas are in the same housing (box body). The exact position of the antennas on the circuit board is a matter of design choice. It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the antennas on opposing sides of the circuit board as it has been held that rearranging parts of the invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claim 3, Vannatta discloses wherein the switching unit switches over the receiving antenna, corresponding to whether the first box body and the second box body are in a folded state or in an unfolded state [col. 7: line 48 – col. 8: line 9].

Regarding claim 4, Vannatta discloses wherein the switching unit, in the case of the folded state, switches over the receiving antenna to the second antenna and, in the case of the unfolded state, switches over the receiving antenna to the first antenna [col. 7: line 48 – col. 8: line 9].

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vannatta in view of Applicant's submission of prior art, Chao-Cheng, US Patent Number 5,991,643 (hereinafter Chao-Cheng).

Regarding claims 5 and 6, Vannatta does not specifically teach these limitations. However, regarding claim 5, Chao-Cheng discloses wherein the switching unit switches

over the receiving antenna in accordance with a receiving sensitivity [col. 3: lines 11-23].

Regarding claim 6, Chao-Cheng discloses wherein the switching unit, when a specified receiving sensitivity is not obtained during a receipt by the first antenna, switches over to the receipt by the second antenna [col. 3: lines 11-23].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Vannatta to include Chao-Cheng as it is known in the art to switch antennas based on reception needs and requirements.

6. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vannatta in view of prior art made of record in the first office action, Chiang et al., US Patent Application Publication Number 2004/0046694 (hereinafter Chiang).

Regarding claim 2, Vannatta discloses a mobile terminal comprising: a first antenna as an omnidirectional antenna; a second antenna as directional antenna; and a switching unit for switching over the antenna for receiving; a printed circuit board mounted with the first antenna and the second antenna; a first box body holding the printed circuit board; and a second box body rotatably secured to the first box body [abstract; col. 4: lines 41-62; col. 7: line 48 – col. 8: line 9].

Vannatta does not expressly disclose wherein the first antenna is provided in the vicinity of a front edge portion on the side opposite to the securing side of the first box body on the printed circuit board, and the second antenna is provided on an flip side of a surface facing the second box body on the printed circuit board when the first box

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body and the second box body are folded together. However, Chiang teaches this limitation [paragraphs 0019, 0020, 0051].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Vannatta to include Chiang in order to have greater range of beam patterns as suggested by Chiang [paragraph 0019].

Regarding claim 3, Vannatta discloses wherein the switching unit switches over the receiving antenna, corresponding to whether the first box body and the second box body are in a folded state or in an unfolded state [col. 7: line 48 – col. 8: line 9].

Regarding claim 4, Vannatta discloses wherein the switching unit, in the case of the folded state, switches over the receiving antenna to the second antenna and, in the case of the unfolded state, switches over the receiving antenna to the first antenna [col. 7: line 48 – col. 8: line 9].

Regarding claim 5, Chiang discloses wherein the switching unit switches over the receiving antenna in accordance with a receiving sensitivity [paragraphs 0020, 0052, 0068, claim 19].

Regarding claim 6, Chiang discloses wherein the switching unit, when a specified receiving sensitivity is not obtained during a receipt by the first antenna, switches over to the receipt by the second antenna [paragraphs 0020, 0052, 0068, claim 19].

Response to Arguments

7. Applicant's arguments filed June 4, 2007 have been fully considered but they are not persuasive. Applicant argues that Vannatta does not teach the location of the

antennas. However, the reference does teach the two antennas in the same housing part and circuit board. The exact location of the antennas on the circuit board is a matter of design choice. The Examiner has also rejected the amended new independent claim with a reference that specifically shows the location of the two antennas on the circuit board.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika A. Gary whose telephone number is 571-272-7841. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EAG
August 6, 2007


ERIKA A. GARY
PRIMARY EXAMINER